

Supplementary Materials:

Table S1. InVEST carbon stock model with four types of carbon pools. [C_above](#) is for the carbon density of aboveground organisms, [C_below](#) is for the carbon density of belowground organisms, [C_dead](#) is for the carbon density of dead organic matter, [C_soil](#) is for the carbon density of soil organic matter.

LULC	C_above	C_below	C_soil	C_dead	References
Cropland	5.00	3.13	22.51	0.63	[4]
Woodland	20.04	4.54	65.59	2.26	[5]
Grassland	12.97	1.69	40.60	1.12	[6]
Water	0.00	0.00	0.00	0.00	[6]
Wetland	3.73	0.62	56.00	1.87	[6]
Urban and rural construction land	5.12	1.02	23.11	0.00	[6]
Unused land	6.34	1.15	20.76	0.57	[7]

Table S2. Biophysical table of InVEST Urban Flood Risk Mitigation model. [Curve number \(CN_A\CN_B\CN_C\CN_D\)](#): The curve number value for this land-use type (LULC) type in the soil group code [A\B\C\D](#)[8].

LULC	CN_A	CN_B	CN_C	CN_D
Cropland	53.15	76.55	76.55	76.55
Woodland	34.3	74.36	74.36	74.36
Grassland	34.2	70.75	70.75	70.75
Water	0.00	0.00	0.00	0.00
Wetland	0.00	0.00	0.00	0.00
Urban and rural construction land	52.07	64.64	64.64	64.64
Unused land	69.80	69.80	69.80	69.80

Table S3. List of selected key conservation species. [The AUC value in the table is a commonly used metric for assessing the accuracy of Maxent's model, with a value between 0 and 1. Typically, the larger the value, the higher the model's accuracy.](#)

Scientific name	Class	AUC
<i>Clematis acerifolia</i> Maxim.	flora	0.994
<i>Schisandra chinensis</i> (Turcz.) Baill.	flora	0.994
<i>Pteroceltis tatarinowii</i> Maxim.	flora	0.993
<i>Platycodon grandiflorus</i>	flora	0.971
<i>Dioscorea nipponica</i> Makino	flora	0.961
<i>Juglans mandshurica</i> Maxim.	flora	0.951
<i>Anemarrhena asphodeloides</i> Bunge	flora	0.919
<i>Actinidia arguta</i> (Siebold & Zucc.) Planch. ex Miq.	flora	0.893
<i>Begonia grandis</i> subsp	flora	0.884
<i>Cynanchum bungei</i> Decne.	flora	0.870
<i>Lilium pumilum</i> Redouté	flora	0.846
<i>Polygonatum sibiricum</i> Redouté	flora	0.845
<i>Scutellaria baicalensis</i> Georgi	flora	0.838

<i>Sorbus alnifolia</i> (Siebold & Zucc.) K.Koch	flora	0.807
<i>Codonopsis lanceolata</i>	flora	0.807
<i>Arctonyx collaris</i>	mammal	0.981
<i>Myotis pequinius</i>	mammal	0.980
<i>Erinaceus amurensis</i>	mammal	0.977
<i>Macaca mulatta</i>	mammal	0.957
<i>Scaptochirus moschatus</i>	mammal	0.946
<i>Myotis mystacinus</i>	mammal	0.941
<i>Sus scrofa</i>	mammal	0.939
<i>Mustela sibirica</i>	mammal	0.917
<i>Myotis blythii</i>	mammal	0.902
<i>Vulpes vulpes</i>	mammal	0.897
<i>Tamias sibiricus</i>	mammal	0.888
<i>Barbastella beijingensis</i>	mammal	0.878
<i>Paguma larvata</i>	mammal	0.875
<i>Prionailurus bengalensis</i>	mammal	0.866
<i>Nyctereutes procyonoides</i>	mammal	0.865
<i>Lepus capensis</i>	mammal	0.857
<i>Naemorhedus griseus</i>	mammal	0.848
<i>Ondatra zibethicus</i>	mammal	0.835
<i>Panthera pardus</i>	mammal	0.833
<i>Meles meles</i>	mammal	0.822
<i>Myotis fimbriatus</i>	mammal	0.813
<i>Sciurus vulgaris</i>	mammal	0.792
<i>Canis lupus</i>	mammal	0.689
<i>Pelophylax nigromaculatus</i>	amphibian	0.967
<i>Rhabdophis tigrinus</i>	amphibian	0.926
<i>Lycodon rufozonatus</i>	amphibian	0.886
<i>Plestiodon capifo</i>	amphibian	0.867
<i>Elaphe anomnala</i>	amphibian	0.861
<i>Elaphe dione</i>	amphibian	0.846
<i>Gloydus brevicaudas</i>	amphibian	0.833
<i>Mergus squamatus</i>	bird	0.991
<i>Aythya ferina</i>	bird	0.989
<i>Podiceps auritus</i>	bird	0.985
<i>Anser cygnoid</i>	bird	0.984
<i>Emberiza jankowskii</i>	bird	0.981
<i>Acrocephalus tangorum</i>	bird	0.978
<i>Turdus feae</i>	bird	0.976
<i>Anser albifrons</i>	bird	0.975
<i>Ciconia boyciana</i>	bird	0.974
<i>Otis tarda</i>	bird	0.970
<i>Emberiza rustica</i>	bird	0.967
<i>Aythya baeri</i>	bird	0.963

<i>Ichthyaelus relictus</i>	bird	0.959
<i>Grus monacha</i>	bird	0.958
<i>Emberiza aureola</i>	bird	0.953
<i>Clanga clanga</i>	bird	0.951
<i>Falco cherrug</i>	bird	0.929
<i>Grus vipio</i>	bird	0.926
<i>Aquila nipalensis</i>	bird	0.859

Table S4. List of environmental factors. 25 factors under two categories of variables, natural environmental factors and anthropogenic disturbances, were used for preliminary prediction of species distribution in MaxEnt software.

Environmental factor	Source	precision	Source website
Bioclimatic variables (Annual Mean Temperature; Mean Diurnal Range (Mean of monthly); Isothermality (BIO2/BIO7) (×100); Temperature Seasonality (standard deviation ×100); Max Temperature of Warmest Month; Min Temperature of Coldest Month; Temperature Annual Range; Mean Temperature of Wettest Quarter; Mean Temperature of Driest Quarter; Mean Temperature of Warmest Quarter; Mean Temperature of Coldest Quarter; Annual Precipitation; Precipitation of Wettest Month; Precipitation of Driest Month; Precipitation Seasonality (Coefficient of Variation); Precipitation of Wettest Quarter; Precipitation of Driest Quarter; Precipitation of Warmest Quarter; Precipitation of Coldest Quarter.)	[1]	30"	https://worldclim.org
Digital Elevation Model	SRTM	90m	https://www.resdc.cn/
Slope	/	90m	/
Aspect	/	90m	/
NDVI	[2]	250m	https://www.earthdata.nasa.gov/
Population Density	[3]	1000m	https://landscan.ornl.gov/
Nighttime Light	Luojia 1	130m	http://59.175.109.173:8888/index.html

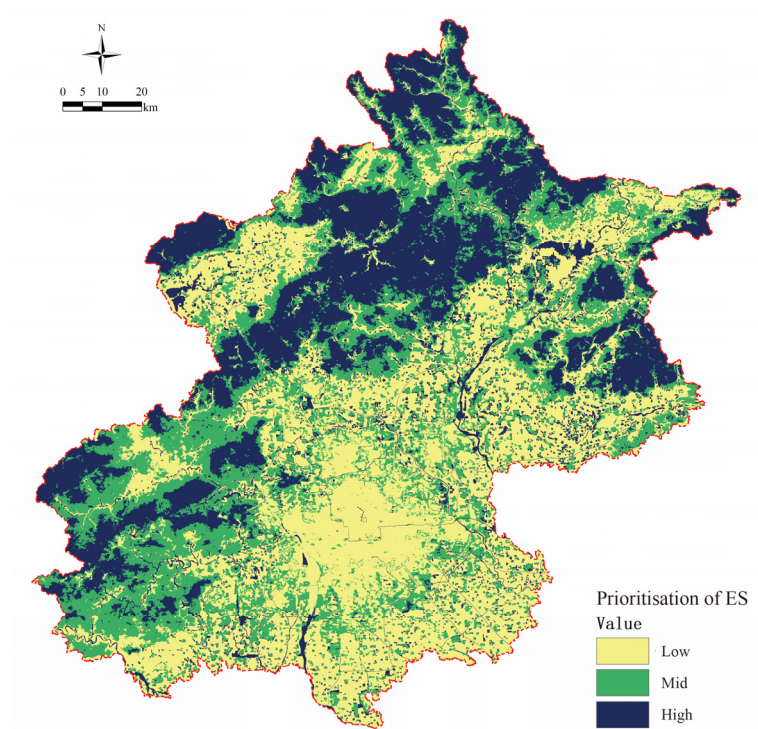


Figure S1. Spatial prioritisation of ecosystem service (ES). The distribution of priority areas considering only ES, The top 30% priority as high, top 30-60% as medium, and the bottom 40% as low.

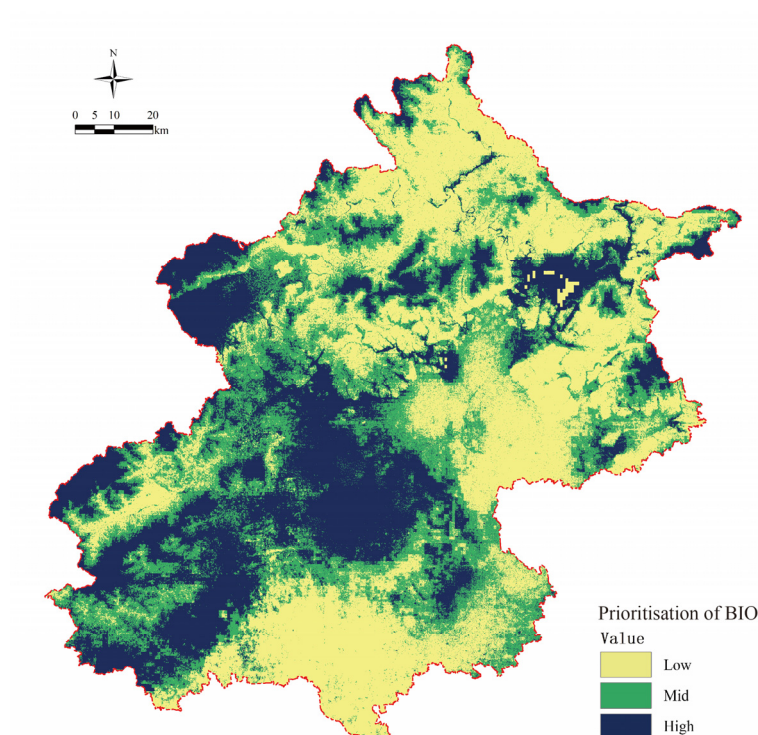


Figure S2. Spatial prioritisation of biodiversity (BIO). The distribution of priority areas considering only BIO. The top 30% priority as high, top 30-60% as medium, and the bottom 40% as low.

References:

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